

IN THE CLAIMS

Please amend the claims as follows:

1-6. cancelled

1 7. (original) A computer program product residing in a computer storage medium for
2 performing power routing on a voltage island within an integrated circuit chip, said computer
3 program product comprising:

4 program code means for generating a first robust power grid for a voltage island
5 on metal levels 1 to N-1;

6 program code means for generating a second robust power grid for said voltage
7 island on metal levels N and above;

8 program code means for determining a bounding region of said second robust
9 power grid; and

10 program code means for routing a plurality of shortest distance connections from
11 a plurality of power sources to said second robust power grid.

1 8. (original) The computer program product of Claim 7, wherein said second robust power
2 grid is a power segment.

1 9. (original) The computer program product of Claim 7, wherein a number of power
2 segments to be generated on said metal level N and above is determined by determining the
3 product of a number of said power sources and a number of connections to be made per power
4 source.

1 10. (original) The computer program product of Claim 7, wherein said computer program
2 product further includes program code means for determining a bounding region of said second
3 robust power grid.

1 11. – (original) The computer program product of Claim 7, wherein said program code means
2 for generating a second robust power grid further includes:

3 program code means for obtaining a count of power source shapes of an identical
4 voltage polarity on a chip;

5 program code means for identifying a chip position at which said voltage island
6 is located;

7 program code means for determining and generating a bounding region on top of
8 said voltage island on which said routing is to be performed; and

9 program code means for generating power grids within said bounding region.

1 12. (original) The computer program product of Claim 7, wherein said program code means
2 for routing further includes:

3 program code means for obtaining a plurality of source points to form an group_A;

4 program code means for dividing said group_A based on connection per source
5 information;

6 program code means for obtaining target power shapes for said second robust
7 power grid on metal level N and above to build a group_B; and

for a given middle shape s in said group_A, program code means for performing ShapeRouting to route from s to a shape t in said group_B.

13. (original) A computer system for performing power routing on a voltage island within an integrated circuit chip, said computer system comprising:

means for generating a first robust power grid for a voltage island on metal levels 1 to N-1;

means for generating a second robust power grid for said voltage island on metal levels N and above;

means for determining a bounding region of said second robust power grid; and

means for routing a plurality of shortest distance connections from a plurality of power sources to said second robust power grid.

14. (original) The computer system of Claim 13, wherein said second robust power grid is a power segment.

15. (original) The computer system of Claim 13, wherein a number of power segments to be generated on said metal level N and above is determined by determining the product of a number of said power sources and a number of connections to be made per power source.

16. (original) The computer system of Claim 13, wherein said computer system further includes means for determining a bounding region of said second robust power grid.

17. (original) The computer system of Claim 13, wherein said means for generating a first robust power grid further includes:

3 means for obtaining a count of power source shapes of an identical voltage polarity
4 on a chip;

5 means for identifying a chip position at which said voltage island is located;

6 means for determining and generating a bounding region on top of said voltage
7 island on which said routing is to be performed; and

8 means for generating power grids within said bounding region.

1 18. (original) The computer system of Claim 13, wherein said means for routing further
2 includes:

3 means for obtaining a plurality of source points to form an group_A;

4 means for dividing said group_A based on connection per source information;

5 means for obtaining target power shapes for said second robust power grid on
6 metal level N and above to build a group_B; and

7 for a given middle shape s in said group_A, means for performing shaperouting
8 to route from s to a shape t in said group_B.

19-21. cancelled